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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,529	11/13/2003	Vladimir I. Gorokhovsky	AME-10/713,529T	9302
46271	7590	10/30/2006	EXAMINER	
JEAN KYLE P. O. BOX 2274 HAMILTON, MT 59840-4274			MCDONALD, RODNEY GLENN	
			ART UNIT	PAPER NUMBER
			1753	

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/713,529

**Applicant(s)**

GOROKHOVSKY, VLADIMIR I.

**Examiner**

Rodney G. McDonald

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-71 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27-31 and 57-71 is/are allowed.
- 6) ☒ Claim(s) 21,23,25 and 37-50 is/are rejected.
- 7) ☒ Claim(s) 22,24,26,32-36 and 51-56 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/826,940.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3/2004; 6/2004.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_.

**DETAILED ACTION*****Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 21, 23 and 37-50 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 3-5, 9, 10, 13, 16-20 of U.S. Patent No. 6,663,755. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 3-5, 9, 10, 13, 16-20 suggest the subject matter of claims 21, 23-26 and 37-50 of the present application. Specifically, Claim 21 of the present application is suggested by claims 1, 13, 17, 18, 19 of U.S. Pat. No. 6,663,755. Claim 23 of the present application is suggested by claim 18 of U.S. Pat. No. 6,663,755. Claim 37 of the present application is suggested by claim 20 of U.S. Pat. No. 6,663,755. Claim 38 is suggested by claim 20 of U.S. Pat. No. 6,663,755.

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Claim 39 is suggested by claim 3 of U.S. Pat. No. 6,663,755. Claim 40 is suggested by Claim 4 of U.S. Pat. No. 6,663,755. Claim 41 is suggested by Claim 5 of U.S. Pat. No. 6,663,755. Claim 42 is suggested by Claim 9 of U.S. Pat. No. 6,663,755. Claim 43 is suggested by Claim 10 of U.S. Pat. No. 6,663,755. Claim 44 is suggested by Claim 16 of U.S. Pat. No. 6,663,755. Claim 45 is suggested by Claim 18 of U.S. Pat. No. 6,663,755. Claim 46-49 is suggested by Claim 20 of U.S. Pat. No. 6,663,755. Claim 50 is suggested by Claims 18 and 20 of U.S. Pat. No. 6,663,755.

Claim 25 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 13, 17, 18, 19 of U.S. Patent No. 6,663,755 in view of Bergmann et al. (U.S. Pat. 5,238,546).

Claim 21 of the present application is suggested by claims 1, 13, 17, 18, 19 of U.S. Pat. No. 6,663,755.

The difference between U.S. Pat. No. 6,663,755 and the present claims is the use of an impulse.

Bergmann et al. suggest utilizing an impulse cathodic arc in a deposition apparatus. (Column 11 lines 36-43)

The motivation for utilizing an impulse cathodic arc is that it allows for stabilizing the vaporizing of coating material. (Column 3 lines 25-26)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified U.S. Pat. No. 6,663,755 by utilizing an impulse because it allows for stabilizing the vaporizing of coating material.

Claims 32-36 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 27-31. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Allowable Subject Matter***

Claims 27-31, 57-71 are allowed.

Claim 22, 24, 26, 51-56 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 22, 24, 26 are indicated as being allowable over the prior art of record because the prior art of record does not teach the isolating coils being surrounding by an anode.

Claims 27-31 are indicated as being allowable over the prior art of record because the prior art of record does not teach a plurality of substantially opposed cathode chambers each supporting a cathodic arc source and being disposed along an elongated plasma duct in communication with the cathode chambers, at least one anode associated with each cathodic arc source, a plurality of magnetic isolating coils each disposed transversely relative to the plasma duct between cathode chamber pairs, and a coating chamber in communication with an end of the plasma duct, the method comprising selectively activating the isolating coil to confine the plasma within a cell formed between isolating coils for a selected interval.

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Claim 51 is indicated as being allowable over the prior art of record because the prior art of record does not teach where at least one of the auxiliary anodes is disposed tangentially to the magnetic force lines generated by the deflecting magnetic coil.

Claim 52 is indicated as being allowable over the prior art of record because the prior art of record does not teach at least one of the auxiliary anodes disposed transversely to the magnetic force lines generated by the deflecting magnetic coil.

Claims 53-56 is indicated as being allowable over the prior art of record because the prior art of record does not teach where there is at least one magnetron arc source disposed within the coating chamber.

Claims 57-63 are indicated as being allowable over the prior art of record because the prior art of record does not teach the claimed subject matter including a deflecting system for directing a flow of plasma to the coating chamber, wherein the deflecting system can be deactivated while the first arc source is activated so that plasma from the first cathode does not flow into the coating chamber but electrons emitted from the first cathode flow into the coating chamber.

Claims 64-66 are indicated as being allowable over the prior art of record because the prior art of record does not teach the claimed subject matter including selectively deactivating a deflecting system that directs plasma from the first cathode into the coating chamber so that substantially only electrons emitted from the first cathode flow into the coating chamber.

Claims 67-71 are indicated as being allowable over the prior art of record because the prior art of record does not teach the claimed subject matter including a

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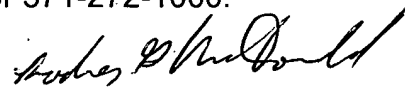
pair of cathode chambers, a main plasma duct in communication with a coating chamber containing a substrate holder for mounting substrates to be coated, the main plasma duct containing at least one main deflecting electrode, a filtered plasma duct in communication with each cathode chamber and in communication with the main plasma duct, the main plasma duct being positioned off of an optical axis of each cathode chamber and each filtered plasma duct being positioned off of an optical axis of the coating chamber, the filtered plasma ducts each containing at least one second deflecting electrode electrically insulated from the filtered plasma duct and disposed adjacent to one or more walls of the filtered plasma duct that are not occupied by the cathode, and at least one deflecting conductor disposed adjacent to each plasma source and filtered plasma duct, wherein plasma generated by each plasma source is deflected by each filtered deflecting electrode through each filtered plasma duct and then deflected by the main deflecting electrode through the main plasma duct to the coating chamber.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney G. McDonald whose telephone number is 571-272-1340. The examiner can normally be reached on M- Th with Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Rodney G. McDonald  
Primary Examiner  
Art Unit 1753

RM  
October 26, 2006